

The highest temperature recorded at any station was 93° at San Jacinto on the 16th. This was 1° higher than the highest temperature during February, 1912. The lowest temperature was -14°, which occurred on the 22d at Alturas and Tamarack. This was 4° lower than the lowest temperature of February, 1912.

#### PRECIPITATION.

The average precipitation for California for February, with departures from the normal, is as follows:

Years.	Mean.	Departure.	Year.	Mean.	Departure.
	<i>Inches.</i>	<i>Inches.</i>		<i>Inches.</i>	<i>Inches.</i>
1897.....	5.85	+1.44	1906.....	4.88	+0.47
1898.....	2.95	-1.46	1907.....	4.14	- .27
1899.....	.45	-3.96	1908.....	3.99	- .42
1900.....	.94	-3.47	1909.....	8.00	+3.59
1901.....	6.03	+1.62	1910.....	2.43	-1.98
1902.....	8.14	+3.73	1911.....	3.33	-1.08
1903.....	1.76	-2.65	1912.....	.75	-3.66
1904.....	7.91	+3.50	1913.....	2.07	-2.34
1905.....	4.24	- .17			

The greatest monthly precipitation was 14.20 inches, at Nellie. Four stations reported no rain during the month.

#### SNOWFALL IN THE MOUNTAINS.

February, 1913, was a month of light snowfall in the Siskiyou, the Coast Range, and the northern portion of the Sierra Nevada. In the Sierra Madre and other ranges of southern California the snow was unusually heavy, and there appears to be ample water for irrigation purposes in the south.

#### SPECIAL COMPARATIVE REPORTS.

*Summit.*—The following table shows depth of snow on ground at Summit, Placer County, on several dates in February for a number of years:

Years.	Feb. 1.	Feb. 14.	Feb. 28.
	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
1907.....	137	95	88
1908.....	88	115	74
1909.....	172	224	213
1910.....	76	70	72
1911.....	223	240	215
1912.....	38	27	23
1913.....	85	55	55

#### SUNSHINE.

The following table gives the total hours of sunshine and percentages of possible:

Stations.	Hours.	Per cent of possible.	Stations.	Hours.	Per cent of possible.
Eureka.....	176	59	Sacramento.....	251	83
Fresno.....	220	73	San Diego.....	175	57
Los Angeles.....	179	58	San Francisco.....	205	68
Mount Tamalpais.....	220	73	San Jose.....	210	69
Red Bluff.....	248	83	San Luis Obispo.....	153	50

There was more sunshine in the northern part of the State than in February, 1912, and less sunshine in the southern part.

#### NOTES ON THE RIVERS OF THE SACRAMENTO AND LOWER SAN JOAQUIN WATERSHEDS DURING FEBRUARY, 1913.

By N. R. TAYLOR, Local Forecaster.

*Sacramento watershed.*—All streams in this watershed fell steadily during the greater part of the month. The main rivers averaged from 5 to 7 feet below the February normal and from 1 foot to over 2 feet below the stages that obtained during the preceding month.

The Sacramento River at all points below Red Bluff was but slightly above the unusually low stages that were recorded during the corresponding month of 1912. From Red Bluff to Kennett the river was the lowest of any previous February of which there is a record.

The American River averaged only 0.5 of a foot above the stage of February, 1912, which is the lowest on record for the month.

The Feather and Yuba Rivers and their tributaries were the lowest of which there is a record for the month, their average stages being comparable with those maintained during the extreme low water period.

There was a marked deficiency in precipitation throughout the drainage basin of the Sacramento Valley. But little snow fell in the high regions of the Sierra Nevada and practically none at all below the 3,500-foot level. The snow already on the ground at the beginning of the month diminished steadily, mostly by evaporation, and without any appreciable effect on the run-off of the mountain streams, many of which were frozen over during the entire month.

The visible water supply is much below that of January 31, and the present outlook is not encouraging.

*Lower San Joaquin watershed.*—Much less than the usual amount of precipitation occurred in this watershed, and as a result all streams, already low at the beginning of the month, continued to fall steadily, their average stages being much below the February normal.

The Calaveras River and the San Joaquin itself, below Lathrop, were the lowest on record for the month of February.

The visible water supply is below the average.

#### NOTES ON THE STREAMS OF THE UPPER SAN JOAQUIN WATERSHED.

By W. E. BONNETT, Local Forecaster.

Mean February stages at all points on the streams of the upper San Joaquin watershed were the lowest of record for that month. The Merced was slightly lower than in January, the San Joaquin remained at exactly the January stage, and the Kings was a trifle higher.

February precipitation in the Kings River watershed was slightly in excess of the normal. It is probable that there was some excess over normal February precipitation in the watershed of the main stream, while there was a deficiency farther north in the Merced area. Slight rises at all points, except at Firebaugh, followed the rains of the 23d to 26th, but by the end of the month there was a recession everywhere almost to the low stages which prevailed before the rains.

At Merced Falls the average stage for February was 0.3 foot, as compared with a seven-year average of 0.9 foot. At Friant there was a mean of -0.6 foot; the seven-year average is 0.8 foot. The San Joaquin at Firebaugh was stationary at -0.9, as compared with an average of 3.4